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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/785,312	02/20/2001	Franciscus Richard Blom	142-360P	1993

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EXAMINER

BUDD, MARK OSBORNE

ART UNIT PAPER NUMBER

2834

DATE MAILED: 08/07/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

785312

Applicant(s)

Blom

Examiner

M. Budd

Group Art Unit

2834

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

## Status

7-1-02

- ☒ Responsive to communication(s) filed on \_\_\_\_\_.
- ☒ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 1, 3-5, 7 and 9-12 is/are pending in the application.
- ☐ Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- ☒ Claim(s) 1, 3-5, 7 and 9-12 is/are rejected.
- ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- ☐ Claim(s) \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

- ☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
  - ☐ All ☐ Some\* ☐ None of the CERTIFIED copies of the priority documents have been received.
  - ☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.
  - ☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_
- ☐ Interview Summary, PTO-413
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other \_\_\_\_\_

Office Action Summary

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan (100) in view of Naka or the prior art.

Japan (100) teaches a piezo actuator for an ink jet printer comprising a block body, layered structures, electrode layers, ground layers and several inactive areas note figs. 3 and 5. Inactive areas are e.g the extreme 'left' and 'right' ends and another near the center. The 'prior art' (applicant's fig.4) and Naka teach separating the piezo element from the ink with a flexible plate. It is not explicitly clear whether the center inactive region of Japan(100) corresponds to the 'spine' connecting the 'fingers' of the active elements. However, the known prior art, (applicant's fig 4) and Naka clearly teach using an inactive area as the connection regions. This, obviously, would eliminate cross talk as well as eliminating inefficiency via supplying power to an inactive, unnecessary area of the transducer. Thus for at least these reasons it would have been obvious to one of ordinary skill in the art that the connecting spine of Japan (100) be an inactive area of the device. Note claim 2 (original) called for an inactive area) which is clearly shown by fig 5(a) of Japan (100). Amended claim 1 calls for the only inactive area to be the

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‘spine’ e.g. the entire connection area is inactive, whereas original claim 2 only called for a portion of the spine to be inactive.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4, 5, 7, 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan (100) in view of Naka or ‘prior art’ and combined with Vehara, Dibbern or Okumura.

These claims add specific lead arrangements. Each of Uehara, Aibbern and Okumura teach that location of electrode leads in piezoelectric transducers is a matter of conveyance and expediency. As demonstrated, the leads can be brought to a single top surface (Okumura) and/or multiple side locations at the designers discretion. Such choices are a matter of obvious design options as would be apparent to one of ordinary skill in the art. The length of the piezo element relative to the ink channel is also a routine design consideration. (Note e.g. Europe(939) fig. 9).

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

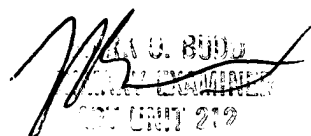
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Budd/ek

08/06/02

  
MARK A. BUDD  
UNIT 2834